

which in turn is a division of application Serial No. 07/337,566, filed April 13, 1989, now abandoned.--

IN THE CLAIMS:

Please cancel original application claims 1-62, and substitute the following new claims 63 and 64.

--63. A storage device employing a flash memory, wherein a storage area of said storage device is divided into a plurality of physical sectors identified by physical addresses, said storage device includes:

logical address conversion means which receives a logical address of data in a data writing operation and converts said logical address into a physical address, and

a memory controller for receiving said physical address resulting from the conversion by the conversion means, and writing said data into a respective physical sector;

wherein said logical address conversion means converts a logical address received in the writing operation to the physical address which is different from the physical address to which said logical address conversion means converted a logical address, identical to the logical address to be presently converted, in a preceding writing operation.

64. A storage device employing a flash memory according to claim 63, further comprising:

a write sector pointer for storing said physical address of the physical sector into which data should be written in the next data writing operation.

wherein said logical address conversion means converts said logical address into said physical address stored in said write sector pointer.--

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logical address conversion means which receives a logical address of data in a data writing operation and converts said logical address into a physical address, and a memory controller for receiving said physical address resulting from the conversion by the conversion means, and writing said data into a respective physical sector;

wherein said logical address conversion means converts a logical address received in the writing operation to the physical address which is different from the physical address to which said logical address conversion means converted a logical address, identical to the logical address to be presently converted, in a preceding writing operation.

### 35 U.S.C. 135(b)

Claim 63 of the present application was added by a Preliminary Amendment filed concurrently with the present application, namely on June 23, 1998. This is more than one year before the '539 patent was granted.

### Effective Filing Date

As specified in the "Cross-Reference to Related Application" section added to the beginning of the present application by the Preliminary Amendment filed with it on June 23, 1998, the present application is entitled to an effective filing date of April 13, 1989. The Filing Receipt issued in the present application is incomplete by not listing all the applications and patents in a chain of copending applications extending back to the parent application filed April 13, 1989, as set forth in a Request for Corrected Filing Receipt, filed by mail on July 31, 1998. No response to this Request has yet been received.

The '539 patent has a United States filing date of November 25, 1992, claiming priority from four Japanese applications, the earliest of which is indicated to have been filed in Japan on November 26, 1991. Thus, the earliest priority date claimed in the '539 patent is over two years later than the April 13, 1989 effective filing date of the present application.

Therefore, it is requested that the interference be declared with the Applicants of the present application designated as the senior party.

Support for the Proposed Count 1 in the Present Application

COUNT 1

A storage device employing a flash memory, wherein a storage area of said storage device is divided into a plurality of physical sectors identified by physical addresses, said storage device includes:

logical address conversion means which receives a logical address of data in a data writing operation and converts said logical address into a physical address, and

a memory controller for receiving said physical address resulting from the conversion by the conversion means, and writing said data into a respective physical sector;

PRESENT APPLICATION

The described memory system embodiment has its memory divided into sectors that are separately addressable. See, for example, Fig. 2 and the description at p 9, lns. 2-29.

Sector substitution is described primarily from p. 23, ln. 12 through p. 24, ln. 8. In one embodiment, the microprocessor looks up an incoming address in a sector defect map and substitutes an alternative sector if a match occurs (p. 24, lns. 3-8).

A substituted alternative sector is provided to the controller with an address command (p. 24, lns. 6-8). The alternative sector is substituted when addressed for any purpose.

wherein said logical address conversion means converts a logical address received in the writing operation to the physical address which is different from the physical address to which said logical address conversion means converted a logical address, identical to the logical address to be presently converted, in a preceding writing operation.

The sector substitution embodiment of p. 24, lns 3-8, pertains to the case described at p. 22, ln. 8 through p. 23, ln. 11, where cells within a sector discovered during a programming (writing) cycle to be bad are substituted and writing then occurs to the new cells. When the defective cells are too many, the entire sector is then substituted as part of this process.

For these reasons, it is submitted to be clear that claim 9 of the '539 patent is supported by the present application disclosure, first filed on April 13, 1989.

#### '539 Patent Prosecution File History

A review of the prosecution file history of the '539 patent reveals that patent no. 5,297,148 was cited but not applied during the '539 patent application prosecution. This patent reference is also a continuation of the April 13, 1989 application, and contains the same disclosure. A European published application counterpart of the present application, namely EP 0392895, was considered by the examiner of the '539 patent application and some claims were rejected over it as prior art. Application claim 37, which eventually became the '539 patent claim 9 copied into the present application, was added by an Amendment filed August 15, 1994, and rejected in the next Office Action on the merits, mailed November 29, 1995, under 35 U.S.C. 103 over a different reference, patent no. 5,295,255. A responsive Amendment, filed May 29, 1996, amended claim 37 into a form that was then allowed, and pointed out its distinctions over both of the references, U.S. patent no. 5,295,255 and European published application no. 0392895.

Distinctions argued over the EP 0392895 reference, over which claim 37 was not rejected, were not well taken, however. An argument on pages 23 and 24 of the Amendment of May 29, 1996, points out alleged distinctions over the references. It is there stated that both of the cited references failed to "... disclose or suggest changing the physical address .. without a pre-condition that an error has occurred in the physical address." (Amendment, p. 24, lns. 7-13) This statement

is incorrect since it is not an error in the "physical address" that EP 0392895 describes but rather an error discovered during the writing process in addressed cells or an entire sector. Further, and more importantly, there is nothing in patent claim 9 that excludes substituting a sector on the basis of such a "pre-condition." Patent claim 9 thus reads directly on the same disclosure as present in EP 0392895 that exists in the present application.

#### Information Disclosure Statement

An Information Disclosure Statement is being prepared to include references cited in parents to the present application and those cited in the '539 patent. It is expected that this Statement, with form 1449 and copies of the references, will be filed about two weeks after the present amendment and request is filed.

#### Related Patent Application

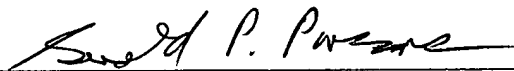
An interference with claim 11 of the '539 patent has been requested in another application, serial no. 09/108,084, filed June 30, 1998. That application is entitled to the benefit of its parent application filing date of September 13, 1991. Both this and the present application are assigned to SanDisk Corporation of Sunnyvale, California.

#### Conclusion

A prompt declaration of the requested interference is respectfully requested. In the meantime, however, if the Examiner has any questions about this request, application or disclosure statements, a telephone call to the undersigned attorney is invited.

Dated: September 22, 1998

Respectfully submitted,



Gerald P. Parsons, Reg. No. 24,486  
MAJESTIC, PARSONS, SIEBERT & HSUE P.C.  
Four Embarcadero Center, Suite 1100  
San Francisco, California 94111-4106  
Telephone: (415) 248-5500  
Facsimile: (415) 362-5418

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